

Prevalence of cervical gonorrhoea in women with unwanted pregnancies

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SUMMARY Cervical specimens were collected from 1688 women attending a gynaecological clinic for induced abortion between February and December 1978. Thirteen (0·77%) women had positive culture results for *Neisseria gonorrhoeae*. Among those women who had a completed family or who came from outside Rotterdam or from outside the neighbouring Rijnmond area, the isolation rate was very low. None of the women with positive culture results developed salpingitis after abortion; all of them had been treated prophylactically with tetracycline. No reasons appear to exist for considering women who seek abortions to be in a high-risk group for cervical gonorrhoea. Whether or not antibiotic prophylaxis should be given for the prevention of salpingitis following abortion requires further study of potentially pathogenic micro-organisms inhabiting the vagina and cervix of women applying for abortion.

Introduction

Abortion performed in women with cervical gonorrhoea may cause an ascending infection.¹ To our knowledge, there have been no reports of a comprehensive study of the occurrence of this complication, although some abortion clinics routinely prescribe antibiotics to prevent such infection. If such prophylactic treatment is aimed at gonococcal infections, it is important to know the proportion of women harbouring gonococci among those who apply for abortion. For this reason, we collected cervical specimens for culture for *Neisseria gonorrhoeae* from a large group of women in an urban centre in the Netherlands.

Patients and methods

Between February and December 1978 we collected specimens from the cervical canal of 1688 consecutive women living in and around Rotterdam who were applying for abortions at this clinic. Specimens were taken with charcoal-impregnated cottonwool swabs; these were placed in Stuart's transport medium. Within four hours of collection two

Thayer-Martin media were inoculated; vancomycin, nystatin, and colistin had been omitted from one of these media. Gonococci were identified according to standard bacteriological methods by Gram staining, oxidase test, and carbohydrate fermentation.

A five-day course of tetracycline was given in the clinic after the induced abortion as routine prophylaxis against ascending infection. Although we instructed all the patients to visit the clinic again 2-3 weeks after abortion, only a few returned. Most of the women living in Rotterdam, however, did so. All patients with positive culture results were followed up.

After 2-8 months the patients' general practitioners were asked whether or not their patient had any evidence of salpingitis, such as fever or abdominal pain.

Results

Demographic details of the patients studied are given in table I. *N gonorrhoeae* was cultured from the cervical canal of 13 (0·77%) women. No woman either having a completed family or living outside Rotterdam and Rijnmond had positive culture results; relatively few positive results were found in married women or in those of 30 years or more.

None of the patients with or without gonorrhoea developed salpingitis.

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Received for publication 20 June 1979

TABLE I Demographic details and the prevalence of cervical gonorrhoea in 1688 women with unwanted pregnancies

Demographic details	Patients studied		Positive culture results	
	No (A)	%	No (B)	% $\frac{B}{A} \times 100$
Residence				
Rotterdam	732	45	10	1.37
Rijnmond (excluding Rotterdam)	114	7	2	1.75
Others	842	48	1	0.12
Age (years)				
<20	340	20	4	1.18
20-29	740	44	7	0.95
>29	608	36	2	0.33
Marital state				
Unmarried	813	48	9	1.11
Married	812	48	4	0.49
Divorced/widow	63	4	0	
Origin				
Dutch	1191	70	9	0.76
Surinam/Dutch Antillian	188	11	3	1.60
Immigrant labourer	147	9	0	
Others	162	10	1	0.62
Indication for abortion				
Completed family	637	38	1	0.16
Other	1051	62	12	1.14
Total	1688	100	13	0.77

Discussion

The results of our study of the prevalence of cervical gonorrhoea in patients applying for abortion agree with those of other studies (table II) with one exception; Burkman and co-workers¹ reported a much higher prevalence. Further information which might allow comparison with the other studies is not given. There is a difference between our study and another Dutch study,² as the latter included 80-85% of women of German origin. Whether or not cervical gonorrhoea is common in patients applying for abortion cannot be stated, as there is no information available on this subject.

In a study of cervical gonorrhoea in patients undergoing gynaecological examinations by their general practitioner,³ of a total of 2000 women 0.4% appeared to have positive results. Although the incidence of genital gonorrhoea in Dutch women has increased by more than 10% in the last three years (Bijkerk H, personal communication), there is no evidence that patients applying for induced abortions should be considered a high-risk group.

On the basis of the results of this study the question whether or not prophylactic antibiotic treatment is useful in induced abortion cannot be answered definitely. An answer can only be given with regard to special categories of the population. Antibiotic prophylaxis did not seem to be justified in older married women or in those visiting our clinic from outside Rijnmond.

Recent published reports^{4,5} draw attention to *Chlamydia trachomatis*, which is a tetracycline-sensitive micro-organism and a possible cause of sexually transmitted diseases. *C. trachomatis* has recently been shown to cause salpingitis,^{6,7} so if antibiotics are prescribed prophylactically they should be antichlamydial as well as antigonococcal.

The authors thank Dr E Stolz, Erasmus University, for his valuable advice during and after the study; Dr J Huisman, Municipal Public Health Service, Rotterdam, for his help in the transport of culture specimens; and technicians of the Dr W F Stormkliniek and the Bacteriological Epidemiological Laboratory for their assistance.

TABLE II Published reports of the prevalence of cervical gonorrhoea in women with unwanted pregnancies

Author (date of publication)	Date of study	No of women	Country (and city)	% Prevalence
Burkman <i>et al</i> (1976)	1973-75	4823	USA (Baltimore)	2.7
Hodgson <i>et al</i> (1974)	1972-73	10 453	USA (Minnesota)	0.67
Goldsmith (1974)	1973	560	USA (Alameda)	0.71
Querido (1979)	1978	1021	Netherlands (Utrecht)	0.30
van der Lugt <i>et al</i> (1980) (present study)	1978	1688	Netherlands (Rotterdam)	0.77

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